BLOOD PRESSURE IN PORTUGAL. DISTRIBUTION, AWARENESS, TREATMENT AND CONTROL OF HYPERTENSION. PAP STUDY

Mario A. Macedo, Maria J. Lima, Antonio O. Silva, Paula Alcantra, Jose Carmona. Internal Medicine, Oporto School of Medicine, Porto, Portugal.

Portugal has one of the major prevalence of strokes in the world. Hypertension is a major cause of cerebrovascular diseases in most countries. Few epidemiological data about blood pressure in Portugal really exists.

Objective: the aim of this study was distribution, awareness, treatment and control of hypertension in a representative Portuguese population sample.

Methods: a cross-sectional household-based survey of 5012 Portuguese adults, aged 1890 years. Standardized techniques were used for BP, height and weight measurements. Hypertension was defined as blood pressure more than 140/90 mmHg.

Results: the preliminary results of this survey showed that the prevalence of hypertension was 19.3%, and of isolated systolic hypertension was 40.4%. Most of this individuals are obese or have excess of weight. The percentage of hypertensive people aware of their situation and with adequate treatment is very little.

Conclusions: the results of this survey suggest that a large proportion of subjects with high blood pressure in Portugal are unaware of their blood pressure, and those who know that are hypertensives have the hypertension not treated or controlled. There is a considerable scope for improving the treatment and control of hypertension in the Portuguese adult population

Key Words: Blood Pressure, Hypertension, Epidemiology

MAY HYPERTENSION INFLUENCE THE SEASONAL VARIATION OF ONSET OF MYOCARDIAL INFARCTION?

Roberto Manfredini, Massimo Gallerauni, Benedetta Boari, Raffaella Salmi, Renato Fellini. Dept. of Clinical and Experimental Medicine, Section of Internal Medicine, University of Ferrara, Ferrara, Italy; Dept. of Internal Medicine, St Anna Hospital, Ferrara, Italy.

Myocardial infarction (MI) shows a seasonal pattern in occurrence, characterized by a winter peak. The findings in countries with different weather conditions, eg. USA, Canada, Japan, Brasil, Germany, Ireland, Italy, suggest that such seasonal variation only in part may depend on climate. The aim of this study was to investigate the possible influence of hypertension on the seasonal pattern. All consecutive subjects with MI presenting to the Hospital of Ferrara, Italy, between January 1997 and December 2001, were considered. Diagnosis was made by means of clinical, laboratory and instrumental findings, or autopsy. Total sample consisted of 2,196 subjects (mean age = 70 years, men = 65.6%). Of these, 418 (19%) had a fatal course. Time of event was defined as the date (day, month, year) of first definite symptoms or signs (chest pain, shock, cardiac arrest). For analysis, each event was categorized both into twelve 1-month intervals and four 3-months intervals (Spring: March 21–June 20; Summer: June 21–September 22; Fall: September 23–December 20; Winter: December 21–March 20). Presence of hypertension was established by history, general practitioner or hospital charts, and use of antihypertensive drugs. Statistical analysis was performed using partial Fourier series and χ2 test for goodness of fit. A significant seasonal variation (peak between October and December; trough in August) was found for total sample (p < 0.001), subgroups by gender (men: p = 0.023; women: p = 0.015), and normotensives (n = 1,666; p = 0.006), whereas hypertensives (n = 530) showed a delayed peak in March (p = 0.036). Non fatal MIs confirmed a December peak (p = 0.037), but fatal events showed a not statistically significant trend for a biphasic peak in March and December. On one hand, a seasonal variation in the onset of MI, with a peak in Fall, is present for normotensives. The findings of a main peak in March for MI in hypertensive subjects and the biphasic pattern of fatal events (resembling that of cerebral hemorrhagic events observed in our geographical area) (Gallerani et al, Stroke 1996) deserve further studies. It is possible that the negative effects of blood pressure increase could be exacerbated in the months of transitional seasons, Spring and Fall, when multiple and frequent stress episodes determined by the typical temperature excursions may concur to precipitate acute events more than the more stable (but not rigid) winter cold.

Key Words: Acute Myocardial Infarction, Seasonal Variation, Hypertension

WHICH BLOOD PRESSURE VALUE IS THE BETTER MARKER OF CARDIOVASCULAR RISK IN THE ELDERLY?

Jesper Mehlsen. Clinical Physiology, Frederiksberg Hospital, Frederiksberg, Denmark.

Recent studies have directed attention to systolic blood pressure as a more adequate marker for cardiovascular risk and have shown increased pulse pressure to be an independent cardiovascular risk factor. The present study analyses the covariation of different measures of blood pressure and attempts to correlate these to the occurrence of cardiovascular disease in an elderly population.

Fifteen general practitioners participated in the study each including 100 consecutive subjects over the age of 60 years attending their clinic from a specific date. A total of 1,505 patients (886 women, 619 men) with a mean age of 73 years (range: 60–94) were included. Blood pressure was measured by the same automated measuring unit (Omron HEM-705CP) three times after five minutes in the sitting position. The participants filled out a questionnaire addressing the presence or absence of symptoms and previous diagnosis of cardiovascular disease.

Five hundred seventy-one patients (38%) had a previous diagnosis of hypertension with a mean duration of 10.6 years (9.7–11.5). Mean values of blood pressure at the initial screening were 143 mmHg (85–213) systolic and 81 mmHg (37–133) diastolic in subjects with no history of hypertension, and 156 mmHg (104,194221) systolic and 86 mmHg (51–123) diastolic in subjects with known hypertension.

Pulse pressure correlated closely with systolic pressure (r = 0.88), less closely with mean pressure (r = 0.58) and only weakly with diastolic pressure (r = 0.17). Pulse pressure showed a weak correlation with age (r = 0.20) but not with heart rate (r = 0.005). These correlations were neither dependent upon sex nor upon the presence or absence of treated hypertension.

A positive history and/or symptoms of cardiovascular disease was significant more frequent in participants with known hypertension (59% versus 49%, p = 0.001). Pulse pressure was significantly higher in participants with a positive history or symptoms of cardiovascular disease than in those without (67 versus 64 mmHg, p = 0.01). In patients not treated for hypertension there was a lower diastolic pressure in those with a history or symptoms of cardiovascular disease compared to those without (80 versus 82 mmHg, p = 0.012).

This study has confirmed the usefulness of pulse pressure as marker of cardiovascular risk in the elderly. The close correlation between systolic and pulse pressure indicates that these variables are interchangeable, whereas diastolic blood pressure seems to be an independent risk marker at low absolute values.

Key Words: Pulse Pressure, Elderly, Epidemiology